

Amendments to the Claims

Claim 1: (Previously Presented) A constrained-envelope digital communications transmitter circuit comprising:

a modulated-signal generator for generating a first modulated signal conveying to-be-communicated data, having a first bandwidth and having a first peak-to-average amplitude ratio;

a constrained-envelope generator for generating a constrained bandwidth error signal in response to said first modulated signal;

a combining circuit for combining said constrained bandwidth error signal with said first modulated signal to produce a second modulated signal conveying said to-be-communicated data, said second modulated signal having substantially said first bandwidth and a second peak-to-average amplitude ratio, said second peak-to-average amplitude ratio being less than said first peak-to-average amplitude ratio; and

~~a substantially linear amplifier configured to amplify said second modulated signal~~

a linearizer configured to pre-distort said second modulated signal into a pre-distorted signal; and

a radio-frequency amplifying circuit configured to generate a radio-frequency broadcast signal from said pre-distorted signal.

Claim 2: (Canceled).

Claim 3: (Currently Amended) A constrained-envelope digital communications transmitter circuit as claimed in claim [2] 1, wherein said constrained-envelope generator is configured so that said constrained bandwidth error signal exhibits a bandwidth substantially equal to or less than said first bandwidth.

Claims 4-5: (Canceled).

Claim 6: A constrained-envelope digital communications transmitter circuit as claimed in claim 1 wherein said modulated-signal generator is a code division multiple access (CDMA) modulator and said first modulated signal conveys a plurality of code-channels of said to-be-communicated data.

Claim 7: A constrained-envelope digital communications transmitter circuit as claimed in claim 6 wherein said CDMA modulator includes a Nyquist-type pulse spreading filter which provides said first modulated signal.

Claim 8: A constrained-envelope digital communications transmitter circuit as claimed in claim 1 wherein said constrained-envelope generator comprises:

a pulse generator responsive to said first modulated signal;
and

a filter having an input coupled to said pulse generator and being configured to generate said constrained bandwidth error signal.

Claim 9: A constrained-envelope digital communications transmitter circuit as claimed in claim 8 wherein said pulse generator is configured to generate a pulse when said first modulated signal exhibits a magnitude greater than a threshold.

Claim 10: A constrained-envelope digital communications transmitter circuit as claimed in claim 9 wherein said pulse generator is further configured so that said pulse exhibits an amplitude which is responsive to a value by which said first modulated signal exhibits said magnitude greater than said threshold.

Claim 11: (Previously Presented) A constrained-envelope digital communications transmitter circuit as claimed in claim 1 wherein said ~~substantially linear amplifier comprises:~~

~~a linearizer configured to pre-distort said second modulated signal into a pre-distorted signal; and~~

~~a radio-frequency amplifying circuit configured to generate a radio-frequency broadcast signal from said pre-distorted signal~~
linearizer is a digital linearizer, and said transmitter circuit additionally comprises a digital-to-analog converter coupled between said digital linearizer and said radio-frequency amplifying circuit.

Claim 12: (Previously Presented) In a digital communications system, a method for transmitting a constrained-envelope communications signal comprising:

generating a first modulated signal conveying to-be-communicated data and having a first bandwidth and a first peak-to-average amplitude ratio;

generating a constrained bandwidth error signal in response to said first modulated signal;

combining said constrained bandwidth error signal with said first modulated signal to produce a second modulated signal conveying said to-be-communicated data, said second modulated signal having substantially said first bandwidth and a second peak-to-average amplitude ratio, said second peak-to-average amplitude ratio being less than said first peak-to-average amplitude ratio; ~~and~~

~~linearly amplifying said second modulated signal~~

linearizing said second modulated signal to produce a pre-distorted signal;

amplifying said pre-distorted signal to generate a communications signal exhibiting a constrained envelope; and
transmitting said communications signal.

Claim 13: A method as claimed in claim 12 wherein said constrained bandwidth error signal exhibits a bandwidth substantially equal to or less than said first bandwidth.

Claims 14-16: (Canceled).

Claim 17: A method as claimed in claim 12 wherein said first-modulated-signal-generating activity configures said first modulated signal as a code division multiple access (CDMA) signal conveying a plurality of code-channels of said to-be-communicated data.

Claims 18-28: (Canceled).

Status of All Patent Claims

1. Pending
2. Canceled
3. Pending
4. Canceled
5. Canceled
6. Pending
7. Pending
8. Pending
9. Pending
10. Pending
11. Pending
12. Pending
13. Pending
14. Canceled
15. Canceled
16. Canceled
17. Pending
18. Canceled
19. Canceled
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